Claims (Attorney Docket No. Mo 6341/LeA 33 270)

1. (Original) Semi-hydrochloride of 8-cyano-1-cyclopropyl-7-(1S,6S-2,8-diazabicyclo[4.3.0]nonan-8-yl)-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid.

2. (Currently amended) Semi-hydrochloride of 8-cyano-1-cyclopropyl-7-(1S,6S-2,8-diazabicyclo-[4.3.0]nonan-8-yl)-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid (CCDC semihydrochloride), having an X-ray powder diffractogram with the following reflection signals (2 theta) of high and medium intensity[[.]]

θ (2 Theta)
5.86
6.90
7.26
8.98
9.35
10.13
10.68
10.97
12.41
13.67
14.57
14.89
15.73
16.07
16.47
16.87
17.78
18.91
19.81
20.04
20.62
20.75
20.93
21.46
21.74
22.92
25.36
25.71
26.98
27.58
28.24
30.61

3. (Currently amended) Semi-hydrochloride of 8-cyano-1-cyclopropyl-7-(1S,6S-2,8-diazabicyclo-[4.3.0]nonan-8-yl)-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid (CCDC semihydrochloride), having X-ray powder diffractogram with the following reflection signals (2 theta) of high and medium intensity[[.]]

2 θ (2 Theta)
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6.90
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21.46
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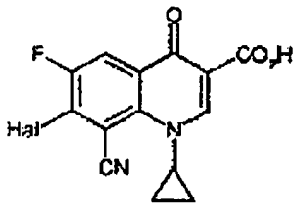
22.92
25.36
25.71
26.98
27.58
28.24
30.61

and a melting point, determined by DTA, of from 278°C to 280°C.

4. (Cancelled).

5. (Currently amended) A process for preparing CCDC semihydrochloride according to Claim 1, comprising reacting 7-halogeno-8-cyano-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid of the formula (II)

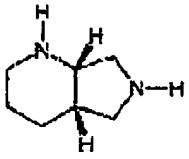


(II),

in which

Hal ~~represents fluorine or~~ represents chlorine

and (1S,6S)-2,8-diazabicyclo[4.3.0]nonane of the formula (III)



~~(IIa)~~ (III)

in the presence of a base in one of the following diluents or diluent mixtures:

a) aliphatic alcohols selected from the group consisting of butanol, isobutanol, 2-butanol, tert-butanol, and 1-pentanol,

b) mixture of aliphatic alcohols selected from the group consisting of propanol, isopropanol, butanol, isobutanol, 2-butanol, tert-butanol, and 1-pentanol with N-methylpyrrolidone,

c) mixture of propanol and N,N-dimethylformamide,

or

d) mixture of ethanol with N-methyl-pyrrolidone with added tripropylamine, tributylamine, N-ethylmorpholine, N-propylmorpholine and/or N-butylmorpholine base.

6. (Previously amended) A process for preparing CCDC semihydrochloride according to Claim 5, wherein the diluent used is an aliphatic alcohol selected from the group consisting of butanol, isobutanol, 2-butanol, tert-butanol, and 1-pentanol or that an aliphatic alcohol selected from the group consisting of ethanol, propanol, isopropanol, butanol, isobutanol, 2-butanol, tert-butanol, and 1-pentanol is used as component of a diluent mixture.

7. (Previously amended) A process for preparing CCDC semihydrochloride according to Claim 5, wherein if an aliphatic alcohol selected from the group consisting of propanol, isopropanol, butanol, isobutanol, 2-butanol, tert-butanol, and 1-pentanol is used as component of a diluent mixture, N-methyl-pyrrolidone is simultaneously employed as a further diluent in a ratio of from 1 to 1 to 3 to 1.

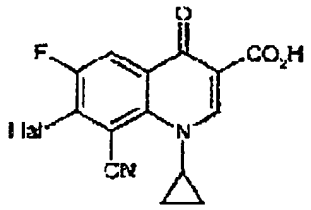
8. (Previously amended) Process for preparing CCDC semihydrochloride according to Claim 6, wherein if propanol is used as component of a diluent mixture, N,N-dimethylformamide is simultaneously employed as further diluent in a ratio of from 1 to 1 to 3 to 1.

9. (Currently amended) A pharmaceutical composition comprising, in addition to ~~customary~~ pharmaceutically acceptable auxiliaries and excipients, CCDC semihydrochloride according to Claim 1.

10. (Currently amended) A method of preparing a pharmaceutical composition comprising ~~formulating~~ combining a CCDC semihydrochloride according to Claim 1 with one or more pharmaceutically acceptable auxiliaries and excipients.

11. (Currently amended) A process for treating bacteria comprising applying ~~thereto~~ to a human or animal an antibacterial composition containing CCDC semihydrochloride as defined in Claim 1.

12. (Currently amended) CCDC semihydrochloride according to Claim 2, obtainable by reacting 7-halogeno-8-cyano-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-3-quinoline-carboxylic acid of the formula (II)

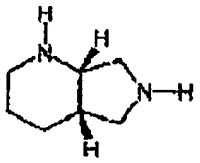


(II),

in which

Hal represents ~~fluorine or~~ chlorine,

and (1S,6S)-2,8-diazabicyclo[4.3.0]nonane of the formula (III)



(III)

optionally in the presence of a base, in one of the following diluents or diluent mixtures:

a) aliphatic alcohols having at least four carbons,

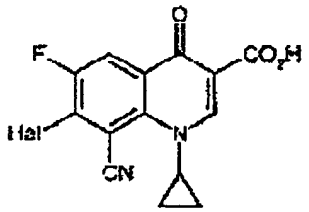
b) mixture of aliphatic alcohols having at least three carbon atoms with N-methylpyrrolidone,

c) mixture of propanol and N,N-dimethylformamide,

or

d) mixture of ethanol with N-methyl-pyrrolidone with added tripropylamine, tributylamine, N-ethylmorpholine, N-propylmorphine and/or N-butylmorphine base.

13. (Currently amended) A process for preparing a CCDC semihydrochloride as defined in Claim 2, wherein 7-halogeno-8-cyano-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid of the formula (II)



(II),

in which

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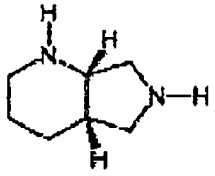
and (1S, 6S)-2,8-diazabicyclo[4.3.0]nonane of the formula (III)



(III)

are reacted in the presence of a base in one of the following diluents or diluent mixtures:

a) aliphatic alcohols having at least four carbon atoms,

b) mixture of aliphatic alcohols having at least three carbon atoms with N-

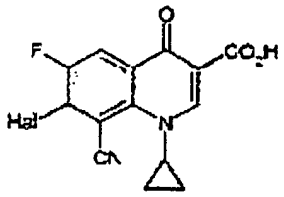
methylpyrrolidone,

c) mixture of propanol and N,N-dimethylformamide,

or

d) mixture of ethanol with N-methyl-pyrrolidone with added tripropylamine, tributylamine, N-ethylmorpholine, N-propylmorpholine and/or N-butylmorpholine base.

14. (Currently amended) A process for preparing a CCDC semihydrochloride as defined in Claim 3, wherein 7-halogeno-8-cyano-1-cyclopropyl-6-fluoro-1,4-dihydro-4-oxo-3-quinolinecarboxylic acid of the formula (II)



(II),

in which

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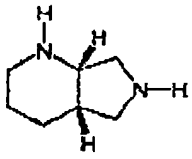
and (1S,6S)-2,8-diazabicyclo[4.3.0]nonane of the formula (III)



(III)

are reacted in the presence of a base in one of the following diluents or diluent mixtures:

a) aliphatic alcohols having at least four carbon atoms,

b) mixture of aliphatic alcohols having at least three carbon atoms with N-methylpyrrolidone,

c) mixture of propanol and N,N-dimethylformamide,

or

d) mixture of ethanol with N-methyl-pyrrolidone with added tripropylamine, tributylamine, N-ethylmorpholine, N-propylmorpholine and/or N-butylmorpholine base.

15. (Cancelled).

16. (Currently amended) A pharmaceutical composition comprising, in addition to ~~customary~~ pharmaceutically acceptable auxiliaries and excipients, CCDC semihydrochloride according to Claim 2.

17. (Currently amended) A pharmaceutical composition comprising, in addition to ~~customary~~ pharmaceutically acceptable auxiliaries and excipients, CCDC semihydrochloride according to Claim 3.

18. (Cancelled).

19. (Currently amended) A method of preparing a pharmaceutical composition comprising ~~formulating~~ combining a CCDC semihydrochloride as defined in Claim 2 with one or more pharmaceutically acceptable auxiliaries and excipients.

20. (Currently amended) A method of preparing a pharmaceutical composition comprising ~~formulating~~ combining a CCDC semihydrochloride as defined in Claim ~~2~~ 3 with one or more pharmaceutically acceptable auxiliaries and excipients.

21. (Cancelled).

22. (Currently amended) A process for treating bacteria comprising applying ~~thereto~~ to a human or animal an antibacterial composition containing CCDC semihydrochloride as defined in Claim 2.

23. (Currently amended) A process for treating bacteria comprising applying ~~thereto~~ to a human or animal an antibacterial composition containing CCDC semihydrochloride as defined in Claim 3.

24. (Cancelled).